

CLAIMS

What is claimed is:

- Suff. A4*
1. A process for removing metals from an aqueous solution comprising the steps of:
2 contacting an aqueous solution with at least one neutralizing agent and at
3 least one precipitating agent that preferentially precipitates metals from the
4 aqueous solution.
 - 1 2. The process of claim 1, wherein the at least one neutralizing agent is selected from
2 the group consisting of limestone, marble, calcium carbonate, calcite, dolostone
3 and dolomite.
 - 1 3. The process of claim 1, wherein the at least one precipitating agent is selected
2 from the group consisting of sandstone, quartz, siltstone, quartzarenite, arkose,
3 shale, feldspar, illite, gravel, granite, basalt, conglomerate, schist, slate, gnesis,
4 diorite, gabbro, and rhyolite.
 - 1 4. The process of claim 1, wherein the metals are selected from the group consisting
2 of iron, iron oxide, silica, aluminum oxide, magnesium oxide, copper oxide,
3 chromium oxide, nickel oxide, lead oxide, zinc, zinc oxide, aluminum,
4 magnesium, cadmium, copper, chromium, nickel, lead.
 - 1 5. The process of claim 1, wherein said step of contacting an aqueous solution
2 involves adding the at least one neutralizing agent and at least one precipitating
3 agent to a natural stream of water.
 - 1 6. The process of claim 6, wherein the at least one neutralizing agent and at least one
2 precipitating agent are added as large blocks so that the water passes over and
3 around the blocks.
 - 1 7. The process of claim 6, wherein the at least one neutralizing agent and at least one
2 precipitating agent are added in gravel form.
- Suff. A5*
- Suff. A6*

- SAC-A2*
- 1 8. The process of claim 1, wherein said step of contacting an aqueous solution
2 involves passing the aqueous solution through a pipe that includes both the at least
3 one neutralizing agent and the at least one precipitating agent.
- 1 9. The process of claim 9, wherein the at least one neutralizing agent and the at least
2 one precipitating agent are provided in the pipe as a mixture of pieces of the at least
3 one neutralizing agent and the at least one precipitating agent.
- 1 10. The process of claim 9, wherein the at least one neutralizing agent and the at least
2 one precipitating agent are provided in the pipe as alternating rings.
- 1 11. The process of claim 9, wherein said step of contacting an aqueous solution
2 includes utilizing pump to urge the aqueous solution through the pipe.

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